

REMARKS

Claims 1-30 are pending in the application. In the Office Action, Claims 1-8, 10-16, 19-21 and 23-30 were rejected under 35 U.S.C. §103(a) as unpatentable over Odenwalder et al. (U.S. Patent 5,909,434) in view of Rikkinen et al. (U.S. Patent 6,031,827); and, Claims 1-30 were rejected on the ground of nonstatutory obviousness-type double patenting (ODP) as being unpatentable over Kim et al. (U.S. Patent 6,768,728, the parent case to the present continuation application).

Regarding the rejections of independent Claims 1 and 11 under §103(a), the Examiner states that Odenwalder et al. in view of Rikkinen et al. renders the claims unpatentable. Applicants respectfully disagree.

Odenwalder et al. discloses bright and burst mode signaling data transmission in an adjustable rate wireless communication system; and, Rikkinen et al. discloses a method for radio resource control.

The present invention relates to an apparatus and method to transmit/receive messages having different frame lengths. Particularly, when a shorter frame (a first frame message) message is generated during the transmission of a longer frame message (a second frame message), the transmission of the longer frame message is interrupted, whereupon the shorter frame message is immediately transmitted.

Claim 1 of the present application recites an apparatus to transmit messages having different frame lengths, upon generating a first and a second frame data of different lengths. However, Odenwalder et al. is directed to controlling symbol repetition rate and puncturing rate, and transmitting the same number of symbols (768 symbols) to the frame having a identical frame length (20ms), regardless of whether input data is user data or signalling data.

Referring to Table 1 in Odenwalder et al. and its description at col. 5, lines 37-39, the

total number of code symbols per frame equals 768 symbols/frame by varying a repetition rate and a puncture rate according to various data input rates. Odenwalder et al. discloses that if user data is transmitted at 24 kbps, the symbol repetition rate is set to 1 and the puncture ratio is set to 1 of 4, as shown in Table 1, so that the user data is transmitted at 768 symbols/frame. And, if signaling data is transmitted together with the user data, the combination is transmitted at 25.6 kbps. Therefore the signaling data and the user data are transmitted at 768 symbols/frame by using the symbol repetition rate set to 1 and the puncture rate set to 5 of 17, as shown in Table 1. This is clearly described at col. 6, lines 41-50 of Odenwalder et al.

That is, as stated above, Odenwalder et al. discloses that regardless of the user data or the signaling data, an identical number of symbols, i.e., 768, per frame having an identical frame length (i.e. 20 ms) as disclosed at col. 3, line 24, are transmitted by controlling the symbol repetition rate and the puncture rate.

On the contrary, the claims of the present application provide that while a message including frames having a general length, i.e., second frame length (20 ms), is transmitted, if a transmission of a message including frames having a length (5 ms), which is shorter than the general length, is requested, the message including frames having a general length and the message including frames having the short length are transmitted. That is, a message that includes frames having different lengths from each other is transmitted.

Moreover, Rikkinen teaches, “replacing a frame with different sized slots and different data”. The Examiner alleged that the present invention can be derived from the combination of Odenwalder et al. and Rikkinen. However, Rikkinen merely discloses that it may change a frame structure.

On the contrary, the present invention does not relate to changing a frame structure, but relates to how to transmit messages having different frame lengths.

Based on at least the foregoing, withdrawal of the rejections of independent Claims 1 and

11 under §103(a) is respectfully requested.

Regarding the rejections of independent Claims 24 and 26 under §103(a), the Examiner also states that Odenwalder et al. in view of Rikkinen et al. renders the claims unpatentable. Applicants again respectfully disagree.

Each of Claims 24 and 26 recite deinterleaving the despread signal by the first frame length and deinterleaving the despread signal by the second frame length. Odenwalder et al. transmits at only one frame length, i.e. 20 ms, as discloses at col. 3, line 24, and thus the frames are received at only one frame length, 20 ms. Thus Odenwalder et al. does not teach or disclose deinterleaving the despread signal by the first frame length and deinterleaving the despread signal by the second frame length. Rikkinen et al. does not cure these defects.

Based on at least the foregoing, withdrawal of the rejections of independent Claims 24 and 26 under §103(a) is respectfully requested.

Regarding the ODP rejections over Kim et al., a terminal disclaimer in the present application is attached hereto, after all of the remaining art rejections are overcome.

Based on at least the foregoing, withdrawal of the rejection of the ODP rejection is respectfully requested.

Independent Claims 1, 7, 11, 24 and 26 are believed to be in condition for allowance. Without conceding the patentability per se of dependent Claims 2-6, 8-10, 12-23, 25 and 27-30, these are likewise believed to be allowable by virtue of their dependence on their respective amended independent claims. Accordingly, reconsideration and withdrawal of the rejections of dependent Claims 2-6, 8-10, 12-23, 25 and 27-30 is respectfully requested.

Accordingly, all of the claims pending in the Application, namely, Claims 1-30, are believed to be in condition for allowance. Should the Examiner believe that a telephone

conference or personal interview would facilitate resolution of any remaining matters, the Examiner may contact Applicants' attorney at the number given below.

Respectfully submitted,


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